

Audit

Report



ECONOMIC DISTRIBUTION OF DISTILLED SPIRITS WITHIN DOD

Report No. 98-126

April 30, 1998

Office of the Inspector General
Department of Defense

DTIC QUALITY INSPECTED 2

19991228 029

AWI00-03-0807

Additional Information and Copies

To obtain additional copies of this audit report, contact the Secondary Reports Distribution Unit of the Analysis, Planning, and Technical Support Directorate at (703) 604-8937 (DSN 664-8937) or FAX (703) 604-8932 or visit the Inspector General, DoD, Home Page at: WWW.DODIG.OSD.MIL.

Suggestions for Audits

To suggest ideas for or to request future audits, contact the Planning and Coordination Branch of the Analysis, Planning, and Technical Support Directorate at (703) 604-8908 (DSN 664-8908) or FAX (703) 604-8932. Ideas and requests can also be mailed to:

OAIG-AUD (ATTN: APTS Audit Suggestions)
Inspector General, Department of Defense
400 Army Navy Drive (Room 801)
Arlington, Virginia 22202-2884

Defense Hotline

To report fraud, waste, or abuse, contact the Defense Hotline by calling (800) 424-9098; by sending an electronic message to Hotline@DODIG.OSD.MIL; or by writing to the Defense Hotline, The Pentagon, Washington, D.C. 20301-1900. The identity of each writer and caller is fully protected.

Acronyms

AAFES	Army and Air Force Exchange Service
ASD(FMP)	Assistant Secretary of Defense (Force Management Policy)
GAO	General Accounting Office
MWR	Morale, Welfare, and Recreation
NEXCOM	Navy Exchange Service Command



INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202

April 30, 1998

MEMORANDUM FOR ASSISTANT SECRETARY OF DEFENSE (FORCE
MANAGEMENT POLICY)
ASSISTANT SECRETARY OF THE NAVY (FINANCIAL
MANAGEMENT AND COMPTROLLER)
ASSISTANT SECRETARY OF THE AIR FORCE
(FINANCIAL MANAGEMENT AND COMPTROLLER)
AUDITOR GENERAL, DEPARTMENT OF THE ARMY

SUBJECT: Audit Report on the Economic Distribution of Distilled Spirits Within DoD
(Report No. 98-126)

We are providing this audit report for your information and use. We performed the audit in reponse to a request by the Assistant Secretary of Defense (Force Management Policy). We considered management comments on a draft of this report when preparing the final report.

Comments on the draft of this report conformed to the requirements of DoD Directive 7650.3 and left no unresolved issues. Therefore, no additional comments are required.

We appreciate the courtesies extended to the audit staff. Questions on the audit should be directed to Mr. Michael A. Joseph, Audit Program Director, email <mjoseph@dodig.osd.mil>, or Mr. Timothy J. Tonkovic, Audit Project Manager, email <ttonkovic@dodig.osd.mil>, at (757) 766-2703. See Appendix F for the report distribution. The audit team members are listed inside the back cover.

A handwritten signature in black ink, reading "Robert J. Lieberman", is positioned above the printed name.

Robert J. Lieberman
Assistant Inspector General
for Auditing

Office of the Inspector General, DoD

Report No. 98-126
(Project No. 7LF-5020)

April 30, 1998

Economic Distribution of Distilled Spirits Within DoD

Executive Summary

Introduction. Section 333 of the "National Defense Authorization Act for Fiscal Year 1996" required the Secretary of Defense to determine whether nonappropriated fund instrumentalities provide the most economical method of distributing distilled spirits. The section required the Secretary to use the Inspector General, DoD, to make these determinations. The audit was requested in December 1996 by the Assistant Secretary of Defense (Force Management Policy) based on requirements in the National Defense Authorization Act for FY 1996.

The Army and Air Force Exchange Service (AAFES) and the Navy Exchange Service Command (NEXCOM) operate 10 distribution centers in the continental United States and Hawaii. The distribution centers are responsible for supplying military retail stores with general merchandise, including distilled spirits. In FY 1996, worldwide distilled-spirit retail sales for AAFES were about \$171 million. NEXCOM worldwide distilled-spirit and wine sales were about \$75 million for the same time period. The NEXCOM figure includes wine sales because information was not available to distinguish between distilled-spirit and wine sales at NEXCOM military stores. We calculated that shipping and handling costs for distilled spirits were about \$1.8 million for AAFES and about \$1.4 million for NEXCOM.

Audit Objectives. The primary objective was to determine whether the military exchange systems provided the most economical method of distributing distilled spirits. The audit also evaluated whether using commercial distributors rather than military exchange distribution centers for distribution of distilled spirits in certain states resulted in direct or indirect taxation of nonappropriated fund instrumentalities. This report discusses the first objective. In a subsequent report, we will discuss the second objective related to taxation and the distribution of distilled spirits in Alaska, Hawaii, North Carolina, and Washington.

Audit Results. In the aggregate, AAFES and NEXCOM purchased and distributed distilled spirits economically. However, we identified instances where AAFES and NEXCOM restricted competition from commercial distributors. As a result, AAFES

and NEXCOM may have incurred unnecessarily higher costs for distilled spirits, thereby reducing profits for morale, welfare, and recreation programs that support active-duty personnel. For details of the audit results, see Part I.

Summary of Recommendations. We recommend that the Assistant Secretary of Defense (Force Management Policy) establish policy for AAFES and NEXCOM to annually determine fair and accurate distilled-spirit case costs using all case cost components. We also recommend that the Assistant Secretary require military store managers or other purchasing authorities to use the case costs to competitively purchase distilled spirits using best business decisions.

Management Comments. The Executive Director, Morale, Welfare, and Recreation and Resale Activities in the Office of the Assistant Secretary of Defense (Force Management Policy) concurred with the recommendation to establish policy for AAFES and NEXCOM to annually determine fair and accurate distilled-spirit case costs using all case cost components. The Executive Director also concurred with the recommendation to establish policy requiring store managers or other purchasing authorities to use those case costs to competitively purchase distilled spirits. The Executive Director stated that the policies would be established by August 1, 1998. See Part I for a summary of management comments and Part III for the complete text of management comments.

Limitations. To determine whether AAFES and NEXCOM were purchasing distilled spirits in the most economical manner, we obtained prices for distilled spirits from commercial distributors. Those prices were obtained for one time period, and were not based on a statistical sample. As a result, the price comparisons cited in this report should not be used as a basis for determining whether the exchange systems should distribute distilled spirits or make individual product line purchasing decisions. Any such decisions should be based on updated per-case shipping and handling costs, as recommended in this report.

Table of Contents

Executive Summary	i
--------------------------	----------

Part I - Audit Results

Introduction	2
Audit Background	2
Audit Objectives	3
Distribution of Distilled Spirits	4

Part II - Additional Information

Appendix A. Audit Process	
Scope	22
Methodology	22
Appendix B. Summary of Prior Coverage	25
Appendix C. Inspector General, DoD, Analysis of the DoD Report to Congress on the Distribution of Distilled Spirits	27
Appendix D. Variables Affecting Case Cost Determinations	31
Appendix E. Analysis of AAFES Case Cost Components	33
Appendix F. Report Distribution	35

Part III - Management Comments

Office of the Assistant Secretary of Defense (Force Management Policy) Comments	38
--	----

Part I - Audit Results

Introduction

During FY 1987, the Navy and Marine Corps consolidated the operations of their military stores selling alcoholic beverages. The consolidation provided the Navy the opportunity to develop better purchasing controls and to obtain discounts accruing from volume purchases of alcoholic beverages. Benefits achievable through consolidation included improved convenience; reduced overhead costs; and increased earnings available to morale, welfare, and recreation (MWR) programs.

In FY 1989, the House Committee on Armed Services issued a report on the National Defense Authorization Act (the Act). It stated that a report prepared by the Army and Air Force Exchange Service (AAFES) concluded that cost avoidances and revenue enhancements would occur if AAFES managed and operated Army and Air Force military stores selling alcoholic beverages. As a result of the AAFES report, the House Committee on Armed Services directed the transfer of all operations involved with the wholesale and retail sales of alcoholic beverages to AAFES to occur no later than October 1, 1988.

AAFES and the Navy Exchange Service Command (NEXCOM) operate 10 distribution centers for the distribution of merchandise to their military stores in the continental United States and overseas. Distilled spirits is one category of merchandise that is stored and distributed from the distribution centers. To distribute distilled spirits and other merchandise in the continental United States, AAFES maintains its own fleet of tractors and trailers. Both AAFES and NEXCOM also contract with commercial carriers for transportation of merchandise to military stores. The Marine Corps does not operate distribution centers, but maintains warehouses that are usually collocated with the military stores.

Audit Background

The audit was requested in December 1996 by the Assistant Secretary of Defense (Force Management Policy) (ASD[FMP]), based on requirements set forth in Section 333 of the Act for FY 1996.

Military Stores. Throughout this report we use the phrase *military stores* to refer to AAFES class VI alcoholic beverage stores and NEXCOM package stores, which sell distilled spirits. Also included in the phrase are shoppettes

and other AAFES and NEXCOM stores that sell alcoholic beverages, including distilled spirits. Alcoholic beverages sold in military stores are for consumption off the premises.

Alcoholic Beverages and Distilled Spirits. Alcoholic beverages include beers, distilled spirits, and wines that contain one-half of 1 percent or more of alcohol by volume and which are fit for human consumption. Distilled spirits include alcoholic beverages obtained by distillation, such as brandy, gin, rum, and whiskey. Distilled spirits normally contain more than 21 percent of alcohol by volume.

Business Year. AAFES and NEXCOM operate on a business year that starts on February 1st and ends on January 31st. Unless otherwise noted, all references to 1996 in the report are for the AAFES and NEXCOM 1996 business year that ended January 31, 1997.

Audit Objectives

The audit objectives were to determine whether the military exchange systems provided the most economical method of distributing distilled spirits. The audit also evaluated whether using commercial rather than military exchange distributors for the distribution of distilled spirits in certain states resulted in direct or indirect taxation of nonappropriated fund instrumentalities. This report discusses the first objective. We will discuss the second objective related to taxation and the distribution of distilled spirits in Alaska, Hawaii, North Carolina, and Washington in a subsequent report. See Appendix A for a discussion of the audit scope and methodology. See Appendix B for a summary of prior reports related to the audit objective.

Distribution of Distilled Spirits

AAFES purchased and distributed distilled spirits in an economical manner during its 1996 business year. Collectively, NEXCOM also purchased and distributed distilled spirits in an economical manner.* However, we identified instances where AAFES and NEXCOM restricted competition from commercial distributors because they did not have a fair and accurate method for determining the most economical source for obtaining distilled spirits.

Specifically:

- AAFES did not include and update all operating costs in the "benchmark" price that it used to evaluate prices offered by commercial distributors;
- NEXCOM did not determine per-case costs for receiving, warehousing, and transporting distilled spirits;
- NEXCOM required military store managers to purchase distilled spirits from NEXCOM distribution centers even if other, lower cost sources were available; and
- commercial distributor service levels were not considered in purchasing decisions.

As a result, AAFES and NEXCOM could not always make the best business decision when purchasing distilled spirits. Additionally, AAFES and NEXCOM distilled-spirit distribution decisions may have resulted in reduced profits for MWR programs that support active-duty personnel.

Criteria

Title 10, United States Code, Section 2488 (10 U.S.C. 2488), "Nonappropriated Fund Instrumentalities," states:

(a) the Secretary of Defense shall provide that:

- 1) Covered alcoholic beverage purchases made for resale on a military installation located in the United States shall be made from the most competitive source, and distributed in the most economical manner, price and other factors considered, except that

*Collectively, but not at every NEXCOM distribution center.

2) in the case of malt beverages and wine, such purchases shall be made from, and delivery shall be accepted from, a source within the state in which the military installation concerned is located.

The Act for FY 1996, Section 333, amended 10 U.S.C. 2488 and added the following subsection:

In the case of covered alcoholic beverage purchases of distilled spirits, to determine whether a nonappropriated fund instrumentality of the Department of Defense provides the most economical method of distribution to package stores, the Secretary of Defense shall consider all components of the distribution costs incurred by the nonappropriated fund instrumentality, such as overhead costs (including costs associated with management, logistics, administration, depreciation, and utilities), the costs of carrying inventory, and handling and distribution costs.

After considering all components of distilled-spirit distribution costs, the Act for FY 1997 required DoD to compile and submit the following information regarding the purchasing and distribution of distilled spirits:

- the extent to which distilled spirits sold on military installations are distributed through the military retail distribution system or through commercial distributors;
- the monetary benefits of distributing distilled spirits through the military retail system; and
- the advantages and disadvantages of requiring distilled-spirit purchases to be made from within the state where the military installation is located.

On December 24, 1996, DoD submitted the "Report on the Distribution of Distilled Spirits" (the Report) to Congress. The Report focused on comparing the economic impact of distributing distilled spirits through AAFES and NEXCOM distribution centers versus the impact of using commercial distributors.

Background

There are three sources for purchasing distilled spirits in DoD: commercial distillers, commercial distributors, and state alcoholic beverage control boards.

Commercial Distillers. Distillers, such as Jim Beam Brands Co.; Heublein, Inc.; and Joseph E. Seagram and Sons, Inc., sell in bulk and normally do not distribute their products to individual retail outlets. AAFES, commercial

Distribution of Distilled Spirits

distributors, NEXCOM, and state alcoholic beverage control boards distribute the products to retail outlets through their own established distribution networks.

Commercial Distributors. Distributors purchase, warehouse, and distribute distilled spirits to retail outlets in the state where they are located. The prices charged by in-state distributors include delivery, handling, and storage of distilled spirits. Those expenses are added to the base case cost of distilled spirits and result in a delivered case cost price that is paid by the retail outlet. As discussed later, distributors sometimes include other services such as stocking the product on store shelves and removing refuse. Distributors normally have exclusive rights to distribute specific commercial brands in their geographic area. In addition to distilled spirits, distributors also distribute beer and wine. Defense Appropriation Acts from the late 1980s to FY 1996 have required AAFES and NEXCOM operations in Alaska and Hawaii to purchase all distilled spirits from in-state distributors. We will address distilled-spirit distribution in those states in a separate report.

State Alcoholic Beverage Control Boards. AAFES and NEXCOM also purchase distilled spirits from state alcoholic beverage control boards. In "control" states, a state agency is responsible for procuring, warehousing, and distributing distilled spirits to retail outlets. Alcoholic beverage or liquor control boards govern 18 states and 1 county. In North Carolina, AAFES and NEXCOM have agreed to purchase all distilled spirits from the state alcoholic beverage control board and, in Washington, are required to purchase all distilled spirits from the alcoholic beverage control board. In the other 16 states and 1 county, AAFES and NEXCOM have the option of purchasing distilled spirits from the alcoholic beverage control boards.

AAFES Distribution Centers. AAFES operates five distribution centers that provide distilled spirits, general merchandise, and other products to AAFES military stores. The distribution centers in Newport News, Virginia, and Waco, Texas, are completely automated with computer-assisted conveyor-belt systems. Employees in the other distribution centers in Atlanta, Georgia; Hickam Air Force Base, Hawaii; and Oakland, California, manually retrieve products from storage locations and load delivery vehicles.

NEXCOM Distribution Centers. NEXCOM operates five distribution centers, located in Chino, California; Great Lakes, Illinois; Jacksonville, Florida; Norfolk, Virginia; and Pearl Harbor, Hawaii. The NEXCOM Pearl Harbor Distribution Center is located within 5 miles of the AAFES Hickam Air Force Base Distribution Center. The centers in Chino and Pearl Harbor are completely automated. The five distribution centers provide distilled spirits, general merchandise, and other products to their retail outlets.

Marine Corps. The Marine Corps Morale, Welfare, and Recreation Support Activity obtains general merchandise from AAFES and NEXCOM distribution centers and local commercial vendors.

Distilled-Spirit Purchasing Procedures. Prior to the AAFES and NEXCOM distilled-spirit retail consolidations, military store managers purchased distilled spirits either from local commercial distributors or through consolidated buying arrangements with other military stores. Subsequent to the consolidation, AAFES military stores were required to order distilled spirits from AAFES distribution centers unless distributors could "meet or beat" AAFES distribution center prices. NEXCOM centralized distilled-spirit purchases and authorized military store managers to obtain distilled spirits from commercial distributors only if the particular distilled-spirit product was not stored in NEXCOM distribution centers.

Distribution Center Savings

AAFES purchased and distributed distilled spirits economically during 1996. Collectively, NEXCOM purchased and distributed distilled spirits economically. We determined that AAFES saved about \$3 million in 1996 by shipping and handling about 517,866 cases of distilled spirits instead of purchasing the distilled spirits from distributors or state alcoholic beverage control boards. We also determined that NEXCOM saved about \$161,000 by shipping and handling about 235,495 cases of distilled spirits during the same time period. In the Report, AAFES did not calculate or report any savings resulting from in-house distribution of distilled spirits. NEXCOM calculated savings of \$9.6 million; however, we determined that the amount was overstated by about \$9.4 million. A detailed discussion of our analysis of AAFES and NEXCOM distribution center savings is in Appendix C.

Our analysis of AAFES, commercial distributor, and NEXCOM case prices for distilled spirits was not based on a statistical sample and should not be used as a basis for making distilled-spirit purchasing decisions. Our analysis of purchasing and distribution information for 1996 provides an indication that savings may be achievable from distribution center operations. Other factors that can influence determinations as to the most economical source for purchasing and distributing distilled spirits are discussed in Appendix D.

Worldwide 1996 distilled-spirit retail sales for AAFES were about \$171 million and distilled-spirit and wine sales were about \$75 million for NEXCOM. The 1996 operating costs for the five AAFES distribution centers were about \$86 million. About \$1.8 million of the \$86 million was attributable to distilled

Distribution of Distilled Spirits

spirits. Operating costs for the five NEXCOM distribution centers were about \$24 million during the same business year. Distribution costs attributable to distilled spirits and wine were about \$1.4 million.

AAFES Method of Distributing Distilled Spirits

AAFES restricted competition from commercial distributors because it did not have a fair and accurate method for determining the most economical source for obtaining distilled spirits. Specifically, it did not include or update all operating costs in the benchmark price that it used to evaluate offers from distributors. Examples of restricted competition are discussed later.

AAFES Benchmark Price. AAFES develops and issues monthly price lists that military store managers use for making distilled-spirit purchasing decisions. The price list includes the per-case cost for distilled spirits carried in AAFES distribution centers, plus a \$2.40 shipping and handling cost. The resulting benchmark cost is used by military store managers to compare and evaluate offers from commercial distributors. To sell distilled spirits to an AAFES military store, a distributor's per-case cost, in most instances, has to meet or beat the benchmark cost provided in the AAFES price list.

Origin of the Benchmark Price. The benchmark price originated in 1989 when a major distiller proposed servicing military stores through its network of distributors for the case cost plus a \$3.00 shipping and handling charge. AAFES made a counteroffer of the case cost plus \$2.15 shipping and handling. The distiller accepted the counteroffer and the \$2.15 shipping and handling was established as the distribution portion of the AAFES benchmark for evaluating offers from distributors.

In August 1989, the General Accounting Office (GAO) began a review to determine whether the benchmark was based on an appropriate economic analysis and whether the estimated per-case shipping and handling cost was reliable for evaluating distribution offers from vendors. The GAO issued Report No. NSIAD-91-77, "Military Exchanges: Exchange Service Management of Army and Air Force Package Stores," February 26, 1991, which concluded that AAFES had not completed an economic analysis before deciding to store and deliver distilled spirits through its distribution network and that the benchmark was inappropriate for evaluating distribution offers from other vendors. Although AAFES did not complete an economic analysis, it did raise the benchmark shipping and handling cost to \$2.40 per case in 1992. The benchmark has not been updated since that time.

Components of Distribution Costs. AAFES did not include all warehousing and distribution costs when it determined its per-case shipping and handling cost. The \$2.40 shipping and handling cost did not include administrative and management costs, inventory carrying costs, or transportation costs to and from distribution centers. Using cost components such as administration, depreciation, and inventory carrying costs in determining the most economic source for obtaining distilled spirits is required by 10 U.S.C. 2488.

AAFES Industrial Engineering Studies. In 1992, AAFES completed industrial engineering studies to determine the average time required to process conveyable and non-conveyable cases of merchandise in its distribution centers. The majority of distribution center cases are classified as conveyable cases because they can be placed on automated conveyor systems within the warehouse. Non-conveyable cases are too heavy or too large to fit on a conveyor system and must be manually handled and loaded onto trailers.

AAFES annually updates conveyable and non-conveyable per-case costs using the per-case processing times determined in 1992. The per-case shipping and handling costs are based on allocated distribution center operating costs, except for inventory carrying costs and out-bound transportation costs. Out-bound transportation costs are separately allocated to the military store. The allocation of operating costs per case is used as a basis for billing military stores for warehousing and delivery services.

Recomputed Per-Case Shipping and Handling Cost. We determined that distilled-spirit shipping and handling costs were between \$3.10 and \$4.06 per case, depending on distribution center location. Distribution center operating costs include depreciation, inventory carrying costs, operations, personnel, and transportation. We computed AAFES distribution centers' 1996 per-case shipping and handling costs by dividing the total distribution center operating costs by the number of cases shipped. For two automated distribution centers, we divided distribution center operating costs attributable to conveyable cases by the number of conveyable cases shipped.

We did not determine administration and management overhead costs attributable to distilled spirits because we could not readily separate those costs from other merchandise categories. We also did not determine the administrative and management savings attributable to consolidated bill paying and centralized management of bulk distilled-spirit purchases. Collectively, we considered that the administration and management expenses and savings offset each other. Table 1 compares the AAFES benchmark per-case cost for shipping and handling to our computations.

Distribution of Distilled Spirits

Table 1. AAFES 1996 Per-Case Shipping and Handling Costs

<u>Distribution Center¹</u>	<u>Our Computation</u>	<u>AAFES Benchmark</u>	<u>Difference</u>
Atlanta	\$ 3.10	\$ 2.40	\$.70
Newport News ²	3.26	2.40	.86
Oakland	4.06	2.40	1.66
Waco ²	3.34	2.40	.94

¹The AAFES Hawaii Distribution Center is not shown because it is required to purchase distilled spirits only from in-state commercial distributors.

²Automated distribution centers.

For an analysis of the case cost components attributable to AAFES distribution center operations, see Appendix E.

Commercial Distributor Distilled-Spirit Prices. For each distilled-spirit line item in the AAFES distribution centers, we compared distributor case costs to our computations and to the AAFES \$2.40 benchmark. To determine distributor distilled-spirit prices, we developed a pricing survey of 592 line items. The 592 items represented various brands, manufacturers, and sizes of distilled spirits collectively warehoused by AAFES and NEXCOM during 1996. The pricing survey was sent to commercial distributors and representatives of state distributors in selected states. We requested that the distributors provide us a per-case cost for delivering any of the distilled spirits on the survey that they could supply to military stores in their area. From the 34 survey responses, we determined a distributor per-case cost for each line item in the survey. See Appendix A for a complete discussion on pricing surveys.

We considered AAFES to have restricted competition when the distributor prices were between the AAFES case cost plus the \$2.40 benchmark per-case shipping and handling cost and the AAFES case cost plus our recomputed shipping and handling cost. AAFES policy allowed the military store manager to purchase from a commercial distributor only if the distributor's price was below the AAFES benchmark price.

Examples of Restricted Competition. The Waco Distribution Center per-case shipping and handling cost was \$3.34 for 1996. This is \$.94 more per case than the AAFES \$2.40 benchmark. We also compared the Waco Distribution Center's actual per-case cost to distributor's per-case costs reported on the pricing surveys. For 118 of the 389 surveyed distilled-spirit line items in the distribution center, at least one distributor in the Waco area offered a per-case

cost between the AAFES benchmark cost and the actual case cost for the distribution center. Table 2 shows specific examples where competition may have been restricted.

Table 2. Waco Region 1996 Per-Case Costs				
<u>Brand</u>	<u>Size</u>	<u>Benchmark Cost on AAFES Price List</u>	<u>Cost Quoted by Commercial Distributor</u>	<u>Actual Cost for the Waco Distribution Center</u>
J&B Scotch	750 ¹	\$ 130.40	\$ 130.98	\$ 131.34
Gibley's Gin	1 ²	69.42	70.05	70.36
Jim Beam	1.75 ³	64.11	64.79	65.05
Calvert Extra	1.75	61.08	61.27	62.02
Windsor Canadian	750	59.82	60.05	60.76
¹ 750 milliliter bottle.				
² 1 liter bottle.				
³ 1.75 liter bottle.				

The 1996 per-case shipping and handling cost for distilled spirits at the Atlanta Distribution Center was \$3.10. This is \$.70 more per case than the AAFES benchmark of \$2.40. The distributor pricing surveys for 239 of the 409 surveyed distilled-spirit line items in the distribution center showed that at least one distributor in the Atlanta area offered a per-case cost between the AAFES benchmark cost and the actual case cost for the distribution center. Table 3 shows some specific examples where competition may have been restricted.

Distribution of Distilled Spirits

Table 3. Atlanta Region 1996 Per-Case Costs

Brand	Size	Benchmark Cost on AAFES Price List	Cost Quoted by Commercial Distributor	Actual Cost from the Atlanta Distribution Center
Chivas Regal	750 ¹	\$ 182.58	\$ 183.18	\$ 183.28
Romana Sambuca	750	157.40	157.50	158.10
Canadian Club	1.75 ²	85.64	85.68	86.34
Bacardi Light Rum	1.75	67.69	68.22	68.39
Jim Beam	750	64.11	64.20	64.81

¹750 milliliter bottle.
²1.75 liter bottle.

Based on the costs shown in the tables, AAFES military store managers could not make a best business decision when purchasing distilled spirits because the \$2.40 benchmark did not fairly represent actual per-case shipping and handling costs.

AAFES Cost-Estimating Initiatives. AAFES took action during the audit to refine its estimates for per-case costs of shipping and handling distilled spirits. Specifically, in February 1997, AAFES performed time and motion studies at its four distribution centers to determine the time it took to handle distilled spirits. Time and motion studies are the analysis of the efficiency with which an operation is performed.

The time and motion studies were used by AAFES to determine the time required for well trained staff, working at a normal pace, to complete specific tasks related to handling distilled spirits. Tasks included completing paperwork, offloading the cases from the trailers, staging the cases for distribution center storage, retrieving the cases from storage, and loading the cases onto a trailer. The AAFES computation included a 40 percent factor that was added to the estimate for employee breaks, fatigue, and other delays.

AAFES compared the February 1997 estimated time to handle distilled spirits to 1992 time and motion estimates of the average time to handle all conveyable cases. The comparison yielded a factor (distilled-spirit handling time divided by

the average handling time for conveyable cases) that was applied to actual operating costs for each distribution center to compute the costs of shipping and handling distilled spirits. Table 4 compares the AAFES computations to its benchmark per-case cost for shipping and handling distilled spirits.

Table 4. AAFES 1996 Per-Case Shipping and Handling Costs			
<u>Distribution Center*</u>	<u>AAFES Computation</u>	<u>Benchmark Shipping and Handling Cost</u>	<u>Difference</u>
Atlanta	\$ 2.16	\$ 2.40	\$ (.24)
Newport News	2.45	2.40	.05
Oakland	2.06	2.40	(.34)
Waco	3.00	2.40	.60

*The AAFES Hawaii Distribution Center is not shown because it is required to purchase distilled spirits only from in-state commercial distributors.

Although we agree that time and motion studies are a valid methodology for computing per-case costs, the AAFES comparison of 1997 handling time for distilled spirits to the 1992 handling time for conveyable cases was not appropriate. Documentation was not available at AAFES to support the 1992 estimates, therefore we could not validate the estimates, nor could we validate that similar methodologies were used in preparing the estimates. In addition, by comparing 1997 estimates to 1992 estimates, AAFES did not consider any changes in the efficiency of the total system that may have resulted from events such as business reengineering improvements, staff turnover and training, equipment deterioration or upgrades, and relocation of commodities within the warehouses. These factors led us to believe that the AAFES estimates were unreliable. Therefore, we used case costs computed from the total number of cases shipped and the total operating costs. We recognize that there are limitations of this methodology, but it used consistent data and time frames for all commodities and could be computed with readily available data. However, even using the AAFES computed costs, there were incidents where AAFES restricted competition, although not with the same frequency as with our cost estimates.

NEXCOM Distilled-Spirit Distribution

NEXCOM restricted competition from commercial distributors because it did not have a fair and accurate method for determining the most economical source for obtaining distilled spirits. Specifically, it did not determine per-case shipping and handling costs for receiving, warehousing, and transporting distilled spirits and it required its store managers to purchase distilled spirits from in-house distribution centers, regardless of price. Examples of restricted competition are discussed later.

Inspector General, DoD, Computation on NEXCOM Per-Case Shipping and Handling Cost. We obtained NEXCOM financial statements for four distribution centers to determine the total operating expenses for each center. The statements included expenses for depreciation, general operations, personnel, and transportation. We allocated operating costs based on the proportion of the dollar value of distilled spirits issued at cost to the total dollar value of all merchandise issued. We also calculated the inventory carrying costs for distilled spirits. We included wine in the inventory carrying cost calculation for the Chino Distribution Center. The Chino center was the only NEXCOM distribution center that ships and handles wine, and did not distinguish between wine and distilled-spirit sales on its financial statements. The resulting allocation of operating expenses and the inventory carrying costs attributable to wine and distilled spirits were then divided by the number of cases of distilled spirits and wine issued to determine a per-case shipping and handling cost. Because NEXCOM did not record the total number of cases issued per year by distribution center, we used NEXCOM merchandising reports and distribution center ordering reports to determine the number of cases of distilled spirits and wine that were issued.

This methodology may overstate the shipping and handling costs attributable to distilled spirits, because the average case cost for distilled spirits is higher than the average cost for all commodity groups in the distribution center. A more accurate method would be to allocate costs based on a ratio of distilled-spirit cases to total cases. However, NEXCOM tracked the dollar value of issuances and not the number of issued cases. Table 5 shows how we arrived at the NEXCOM 1996 per-case shipping and handling costs for distilled spirits.

Table 5. NEXCOM 1996 Shipping and Handling Costs

<u>Distribution Center¹</u>	<u>Actual Costs²</u>	<u>Number of Cases Issued</u>	<u>Cost Per Case</u>
Chino	\$ 499,023	54,423	\$ 9.17
Great Lakes	18,006	1,487	12.11
Jacksonville	441,075	89,450	4.93
Norfolk	470,015	90,135	5.21

¹The NEXCOM Hawaii Distribution Center is not shown because the Navy is required to purchase distilled spirits from in-state commercial distributors.

²Based on our computations.

We did not determine administration and management overhead costs attributable to distilled spirits nor did we determine the administrative and management savings attributable to consolidated bill paying and centralized management of bulk distilled-spirit purchases. We considered the administration and management expenses and savings to offset each other.

Chino Distribution Center. NEXCOM restricted competition to military stores served by the Chino Distribution Center because it had not determined a per-case shipping and handling cost and because of its restrictive purchasing policies. The Chino Distribution Center per-case shipping and handling cost was \$9.17 during 1996. Distributor pricing surveys for 79 of the 327 surveyed distilled-spirit line items in the distribution center showed that at least one distributor in the region serviced by the Chino Distribution Center offered a per-case cost lower than the Chino Distribution Center per-case cost. Table 6 shows some specific examples where competition may have been restricted based on our cost estimate.

Distribution of Distilled Spirits

Table 6. Chino Region 1996 Per-Case Costs

<u>Brand</u>	<u>Size</u>	<u>NEXCOM Chino Cost⁴</u>	<u>Cost Quoted by Commercial Distributor</u>
J&B Scotch	750 ¹	\$ 140.17	\$ 131.00
Ron Rico Gold Rum	1.75	72.63	67.95
Beefeater Gin	1.75 ²	124.99	122.00
Wild Turkey 101	50 ³	116.08	108.45
Windsor Canadian	750	70.09	68.95

¹750 milliliter bottle.
²1.75 liter bottle.
³50 milliliter bottle.
⁴Based on our computations.

Norfolk Distribution Center. NEXCOM similarly restricted commercial distributor competition at the Norfolk Distribution Center. The Norfolk Distribution Center per-case shipping and handling cost was \$5.21 for 1996. Distributor pricing surveys for 67 of the 333 surveyed distilled-spirit line items in the distribution center showed that at least one distributor in the region serviced by the Norfolk Distribution Center offered a lower per-case cost. Table 7 shows some specific examples where competition may have been restricted.

As shown in Table 6 and Table 7, NEXCOM did not always make the best business decision because it was unable to fairly and accurately evaluate offers from commercial distributors.

Table 7. Norfolk Region 1996 Per-Case Costs

<u>Brand</u>	<u>Size</u>	<u>NEXCOM Norfolk Cost⁴</u>	<u>Cost Quoted by Commercial Distributor</u>
J&B Scotch	750 ¹	\$ 136.21	\$ 131.10
Christian Brothers Brandy	50 ²	67.46	56.42
Peppermint Schnapps	750	68.21	64.65
Malibu Rum	750	95.21	85.46
Chivas Regal	1.75 ³	210.66	208.80

¹750 milliliter bottle.
²50 milliliter bottle.
³1.75 liter bottle.
⁴Based on our computations.

Restrictions on NEXCOM Store Managers. For products stored at distribution centers, NEXCOM required military store managers to purchase distilled spirits only from its distribution centers, even if other, lower cost sources were available. Competition was restricted because NEXCOM store managers were unable to take advantage of lower prices offered by commercial distributors.

In 1996, a distilled spirits buyer at NEXCOM headquarters centrally managed distilled spirits for military stores serviced by the Chino, Great Lakes, and Norfolk distribution centers. The distilled spirits buyer made the decision whether distilled spirits should be purchased directly from a commercial distiller and stored in the distribution centers or purchased from a commercial distributor. The buyer did not have a fair method for evaluating offers from commercial distributors and made purchasing decisions based on experience and historical sales volume. The NEXCOM distilled spirits buyer also authorized the military store manager to buy items not stored in NEXCOM distribution centers.

Jacksonville Distribution Center. During 1996, distilled-spirit purchases were managed by a distilled spirits buyer located in the Jacksonville region. Unlike the distilled-spirit purchases made by the NEXCOM headquarters buyer, the

Distribution of Distilled Spirits

Jacksonville buyer purchased distilled spirits entirely from commercial distributors. The distilled spirits were then delivered to and distributed by the NEXCOM Jacksonville Distribution Center. The buyer, without doing an economic analysis, believed this was the most economical method of purchasing and distributing distilled spirits. We did not evaluate the economic validity of the Jacksonville buyer's purchasing decisions because NEXCOM plans to manage distilled-spirit purchases through its headquarters buying office in 1998.

Service Levels

The difference in service levels between commercial distributors and the military distribution centers should be a consideration in the overall purchasing decision. Commercial distributors sometimes provide a variety of services to military stores in addition to warehousing and delivering the product. Services include stocking the product on the shelves, removing refuse, and maintaining sales area displays. Those services are not provided when distilled spirits are obtained from an AAFES or NEXCOM distribution center. Military store employees must unload the delivery truck, stock the shelves, and maintain the sales floor.

Product availability (in-stock rates) and flexible delivery schedules are also integral components of a service level. Low in-stock rates can result in customer dissatisfaction and lost sales. For distilled spirits, AAFES distribution centers reported in-stock rates of between 79 percent and 83 percent, and NEXCOM distribution centers reported in-stock rates of between 92 percent and 97 percent. Commercial distributors stated that their in-stock rates exceeded 98.2 percent. We did not validate the in-stock rates for AAFES and NEXCOM distribution centers or commercial distributors.

Commercial distributors can provide flexible and timely delivery of distilled spirits that is not always available from AAFES or NEXCOM distribution centers. When military stores sell out of a popular brand of distilled spirits received from a distribution center, the military store manager must wait until the next regular scheduled delivery, which can vary depending on the military store's size and location. Commercial distributors, in some cases, may be able to deliver distilled spirits the same day the order is placed.

We were not able to quantify the monetary value that service levels add to commercial distributor case costs. In our opinion, their service level can provide a benefit that should be considered in the purchase of distilled spirits. Some of the benefits may include:

- less military store employee time spent stocking and maintaining sales area shelving and displays;
- improved inventory management due to detailed and frequent review of commercial distributor-supplied items;
- higher in-stock rates for military stores serviced more than twice a week; and
- lower inventory requirements at military stores because stock levels decrease as the replenishment cycle shortens.

Purchasing decisions should always consider service levels, especially when AAFES and NEXCOM distribution center prices are close to commercial distributor prices.

Best Value Purchasing

The distribution of distilled spirits has been an issue since the late 1980s when AAFES and NEXCOM began purchasing distilled spirits from distillers for internal distribution. AAFES and NEXCOM are required by statute to purchase distilled spirits from the most economical source, price and other factors considered. Commercial distributors have expressed concerns that the military retail system understated distilled-spirit distribution costs and that the costs and benefits of buying from commercial distillers versus commercial distributors were not determined.

DoD has acquisition reform goals that include buying better products, obtaining the products in less time, and obtaining products at less cost. These are interdependent goals, meaning a store manager could pay a higher per-case cost to a distributor to obtain faster delivery or better quality of service. Although these goals were not intended for the MWR arena, we believe they are relevant. When AAFES and NEXCOM can purchase distilled spirits from distributors offering advantages in availability, price, and service, they should be able to do so. Although the distribution centers provide savings in the aggregate, additional efficiencies may be possible by allowing commercial distributors to fairly compete for business on individual products. When commercial

Distribution of Distilled Spirits

distributors can provide an item at a better price than the distribution center, it allows the military store to earn a higher profit and thereby increase the benefits to active-duty MWR programs.

The value of military stores to active-duty and retired personnel, and their families, depends on convenience, service, product selection, and price. In our opinion, military store managers or other purchasing authorities should have the opportunity to make the business decisions that will provide the maximum value to their patrons. NEXCOM expressed concern that such authority should not be given to a store manager. Although we believe the store manager is the appropriate location of such authority, our main concern is that best business decisions be made that allow for open competition. As a minimum, the store manager should be provided meet or beat price lists even if the store manager is not allowed to make purchasing decisions. Store managers are in the best position to identify opportunities for savings because of their close proximity to commercial distributors.

Recommendations and Management Comments

We recommend that the Assistant Secretary of Defense (Force Management Policy) establish policy for the Army and Air Force Exchange Service and the Navy Exchange Service Command to:

- 1. Annually determine and disseminate to all military store managers a fair and accurate per-case shipping and handling cost that competitors will have to "meet or beat." The cost should be based on all cost components of distribution center operations attributable to distilled spirits.**
- 2. Require military store managers or other purchasing authorities to use the per-case shipping and handling cost to competitively purchase distilled spirits using best business decisions.**

Management Comments. The Executive Director, MWR and Resale Activities, Office of the ASD(FMP), concurred, stating that policy implementing both recommendations will be established by August 1, 1998.

Part II - Additional Information

Appendix A. Audit Process

Scope

Work Performed. We examined 1996 information relating to the purchase, storage, and distribution of distilled spirits. We obtained information from AAFES and NEXCOM that related to headquarters, distribution centers, and military store operations. We also obtained information from state governments and civilian distributors and obtained AAFES and NEXCOM distilled-spirit prices for items purchased directly from distillers and distributors.

We also obtained information from AAFES and NEXCOM that showed the number of cases of distilled spirits that they distributed in 1996. We compared that information to the operating costs that were attributable to the distribution of distilled spirits to determine AAFES and NEXCOM distilled-spirit shipping and handling costs.

Audit Period and Standards. This economy and efficiency audit was performed from January through October 1997 in accordance with auditing standards issued by the Comptroller General of the United States as implemented by the Inspector General, DoD. The audit did not rely on statistical sampling.

Methodology

Use of Computer-Processed Data. We relied on computer-processed data contained in AAFES and NEXCOM databases. We relied on cost information from the AAFES automated financial systems to determine the actual cost of distributing a case of distilled spirits for 1996. We also relied on automated cost information from NEXCOM distribution centers to determine the extent of their distilled-spirit purchases and the related storage and transportation costs. We did not verify the accuracy of the computer-processed data for the automated systems. We worked closely with AAFES and NEXCOM personnel in analyzing the data and nothing came to our attention during the audit that caused us to doubt the reliability of the computer-processed data.

Distilled-Spirit Per-Case Shipping and Handling Cost. To determine AAFES and NEXCOM distilled-spirit per-case shipping and handling costs, we obtained 1996 financial reports for their distribution centers. We allocated a portion of the total cost of operating the distribution centers to distilled-spirit distribution operations. For AAFES distribution centers, we proportionally

allocated total operating costs to the cases of distilled spirits issued. To this case cost, we added inventory carrying costs using the average monthly ending inventory for 1996 multiplied by the AAFES short-term borrowing rate.

NEXCOM tracks the dollar amounts of issues and not the number of cases issued. We allocated operating costs based on the proportion of the dollar value of distilled spirits issued at cost to the total dollar value of all issues. We then divided the costs attributable to distilled spirits by the cases of distilled spirits issued by each distribution center. Because NEXCOM did not record the total number of cases issued per year by distribution center, we derived the number of distilled-spirit cases issued from NEXCOM merchandising reports and distribution center ordering reports. To this case cost, we added inventory carrying costs using the average monthly ending inventory for 1996 multiplied by the NEXCOM short-term borrowing rate. This methodology may overstate the shipping and handling costs attributable to distilled spirits, because the average case cost for distilled spirits is higher than the average cost for all commodity groups in the distribution center.

Commercial Distributor Case Prices. To determine a case cost for distilled spirits delivered by a distributor, we developed a survey of 592 line items. The line items represented brands and sizes of distilled spirits distributed through the distribution centers during 1996. The surveys were sent to commercial distributors and distributor representatives in the states shown in the following table.

Commercial Distributor Price Surveys	
State	Surveys Returned
Arizona	1
California	1
Colorado	4
Florida	2
Georgia	3
Illinois	2
Kansas	3
Kentucky	5
Maryland	2
Nevada	1
Rhode Island	1
South Carolina	2
Texas	5
Virginia	2
Total	34

Appendix A. Audit Process

We asked the distributors to provide us a delivered case cost for the products they represented if they were to supply the DoD military stores in their area with those products. We also asked them to outline the services that they could provide to the DoD retail outlets. We did not attempt to validate the case costs provided by the distributors. The survey costs provided a point of comparison for a given point in time, and should not be used for future purchasing decisions.

From the pricing survey responses, we determined a distributor case cost for each line item in the survey. When there were three or more distributor responses in a region serviced by an exchange distribution center, we used the midpoint case cost as the regional distributor case cost. If we did not have enough survey responses to obtain a regional price, we determined a national midpoint price from all of the 34 price surveys. If there were an even number of pricing survey responses for a line item, the lower price was used.

Contacts During the Audit. We visited or contacted individuals and organizations within DoD, private companies, and state governments relating to the distribution of distilled spirits. Further details are available on request.

Appendix B. Summary of Prior Coverage

No government reports directly relating to the distribution of distilled spirits in DoD were published in the last 5 years. However, the General Accounting Office (GAO) issued a report in 1991 and the Inspector General, DoD, issued a report relating to alcohol misuse in DoD. In addition, the exchange services contracted with the accounting firm Deloitte & Touche LLP to review distilled-spirit distribution in AAFES, NEXCOM, and the Marine Corps. The Deloitte & Touche LLP reports were not audits and the reviews were limited to specific distribution centers.

General Accounting Office

General Accounting Office Report No. NSIAD-91-77, "Military Exchanges: Exchange Service Management of Army and Air Force Package Stores," February 26, 1991. This report states that AAFES did not conduct an economic analysis before deciding to store and deliver distilled spirits through its distribution network, and therefore did not determine whether that decision was cost-effective and efficient. In addition, GAO stated that the AAFES cost estimate of \$2.15 per case (adjusted to \$2.40 in 1992), based on an economic analysis for a specific vendor, was inaccurate for that vendor and inappropriate for evaluating the distribution offers of other vendors. GAO did not make any recommendations, but stated that AAFES planned to revise and update the economic analysis model, and with the revised model AAFES could develop a reliable per-case estimate to equitably evaluate each distributor's offer.

Deloitte & Touche LLP

Deloitte & Touche LLP conducted three separate studies of the exchange services' buying and distribution systems for distilled spirits in connection with contract NNA250-95-D-002, issued by NEXCOM. The studies did not constitute an audit made in accordance with generally accepted auditing standards, and Deloitte & Touche LLP, therefore, did not express an opinion on any of the accounts or items referred to in any of the reports. Deloitte & Touche LLP only performed procedures and inquiries requested by the military exchange systems and, therefore, would not make a representation of the sufficiency of the procedures and inquiries conducted.

"Army & Air Force Exchange Service Review of Standards and Benchmark Costs For Distilled Spirits Distribution," March 3, 1995. The report states that AAFES made the correct economic business decision at its distribution

Appendix B. Summary of Prior Coverage

center in Newport News, Virginia, with respect to selecting the lowest cost channel of distribution for distilled spirits. The analysis was limited to understanding how the engineering standard for handling distilled spirits, at the Newport News Distribution Center, was converted to and reflected in benchmark costs. The benchmark costs were used to determine the most economical purchasing choice between a distiller and a distributor.

“Navy Exchange Service Command Distilled Spirits Procurement Process Review,” March 3, 1995. The report states that it appeared that NEXCOM at the Norfolk Distribution Center purchased distilled spirits in the most cost-effective and efficient manner. The review found that NEXCOM earned approximately 2 percent more gross margin on the distilled spirits and wine purchased from distillers versus distributors. The report further states that if the average gross margin for wine is lower than distilled spirits, then the gross margin for distilled spirits purchased from distributors will be proportionately higher and any margin benefit attributable to distillers will be reduced. *Note: The NEXCOM Instruction 1700.6D, “Packaged Alcoholic Beverage Sales At Navy Installations,” March 15, 1996, provides a pricing policy that shows distilled spirits with a 5 percent higher markup than on wine.*

“US Marine Corps Distilled Spirits Procurement Process Review,” March 3, 1995. The Marine Corps does not operate distribution centers. It warehouses distilled spirits purchased directly from AAFES or NEXCOM distribution centers or commercial distillers. Deloitte & Touche LLP limited its review to Camp Pendleton and El Toro, California. This is significant because California does not exempt the Marine Corps from the state liquor tax on in-state distilled-spirit purchases. The report states, primarily because of taxation, the Marine Corps at Camp Pendleton and El Toro made the correct purchasing decision when buying directly from the distiller or from NEXCOM. The report further states that the distributors provided a significant benefit with high-quality services. However, the benefits of the services were not included in the quantitative results.

Appendix C. Inspector General, DoD, Analysis of the DoD Report to Congress on the Distribution of Distilled Spirits

The National Defense Authorization Act for FY 1997 required DoD to compile and submit information regarding the purchasing and distribution of distilled spirits. The Act states:

Section 333 of the National Defense Authorization Act for Fiscal Year 1996 (Public Law 104-106) required the computation of the full cost to the military exchanges for the distribution of distilled spirits, including the costs associated with management, logistics, administration, depreciation and utilities. The purpose of this provision was to ensure that distilled spirits are distributed in the most economical manner. The committee is interested in the extent to which this requirement has resulted in a change in distribution methods. Therefore, the committee directs the Secretary of Defense to report by December 31, 1996, on the extent to which distilled spirits sold on military installations are distributed through the exchange distribution system or through private distributors, and any costs savings which have resulted from this requirement. Additionally, the committee directs the Secretary of Defense, in the same report, to discuss the advantages and disadvantages of requiring purchases and delivery of distilled spirits, for resale on a military installation located in the United States, to be made from a source within the state in which the military installation is located.

Report to the Committee on National Security. On December 24, 1996, DoD submitted the "Report on the Distribution of Distilled Spirits" to the Committee on National Security. The Report states that after consideration of the full costs for distributing distilled spirits, no change resulted in the purchasing and distribution practices for AAFES and NEXCOM. The Report concludes that AAFES and NEXCOM provided the most efficient and cost-effective distribution of distilled spirits.

The Report findings and conclusions were based on submissions from AAFES and NEXCOM. AAFES submitted a Fact Paper that focused on its decision criteria for determining the source for purchasing distilled spirits. NEXCOM submitted a report that projected savings of \$9.6 million from purchasing distilled spirits directly from a distiller instead of a distributor.

Distilled-Spirit Distribution Savings. Although we agree that in the aggregate DoD is purchasing distilled spirits in the most economical manner, AAFES did not determine the savings resulting from the distribution of distilled spirits through its distribution centers. NEXCOM prepared a comprehensive savings analysis that contained significant mathematical errors.

Appendix C. Inspector General, DoD, Analysis of the DoD Report to Congress on the Distribution of Distilled Spirits

AAFES. The Report discusses the AAFES decision criteria that was used to establish the benchmark distribution cost of \$2.40 a case. The Report states that by using the benchmark price, AAFES was assured of obtaining the lowest cost available every time a military store order was placed. However, the Report does not provide information regarding the cost savings obtained from using the AAFES benchmark price.

NEXCOM. NEXCOM projected a net savings of \$9.6 million in 1996 by purchasing distilled spirits directly from distillers and distributing the products through NEXCOM distribution centers. The Report includes the NEXCOM analysis used to support the projected 1996 savings.

Inspector General, DoD, Comments. Although NEXCOM complied with the Act, we found that it overstated savings by \$9.4 million because of significant mathematical errors and incomplete information.

Distributor Case Cost. To determine if AAFES and NEXCOM purchased distilled spirits from the most economical source, we analyzed the case costs of distilled spirits issued in 1996. We determined the case cost savings by comparing the distiller case cost plus per-case shipping and handling costs to the delivered case cost from a distributor. After obtaining the case cost savings, we calculated the savings for each product line item by multiplying the case cost savings by the number of cases issued from the distribution center. We added the savings for each product line item to obtain the total savings. After deducting the AAFES and NEXCOM case cost of purchasing and distributing distilled spirits, we were able to determine the case cost savings, if any. Appendix A contains a discussion of the methodology used in obtaining and analyzing case costs.

We determined that AAFES saved \$3,109,623 by purchasing distilled spirits from distillers in 1996. NEXCOM saved \$161,254. Table C-1 shows the results for AAFES and NEXCOM distribution centers.

**Appendix C. Inspector General, DoD, Analysis of the DoD Report to Congress on
the Distribution of Distilled Spirits**

Table C-1. Savings Available to DoD by Purchasing Distilled Spirits Directly from Commercial Distributors	
AAFES Distribution Center Location	AAFES Savings (Loss) From Direct Purchase of Distilled Spirits
Atlanta	\$ 433,680
Newport News	1,033,736
Oakland	224,094
Waco	1,418,113
Total	\$ 3,109,623
NEXCOM Distribution Center Location	NEXCOM Savings (Loss) From Direct Purchase of Distilled Spirits
Chino	\$ 3,443
Great Lakes	(5,880)
Jacksonville	(256,926)
Norfolk	420,617
Total	\$ 161,254

Corrected NEXCOM Savings Analysis. We reconciled the \$9.6 million savings that NEXCOM projected in their submission to DoD to our recomputed savings of \$161,000. The majority of the difference, \$8.4 million, is attributable to mathematical errors. For several product line items, NEXCOM calculated the case cost savings obtained from purchasing a case of distilled spirits from a distiller versus a distributor and multiplied the savings by every *bottle* instead of every *case*. The remaining \$1 million difference occurred because NEXCOM did not include all product line items in its savings analysis. Additionally, because of a timing difference, NEXCOM annualized 8 months of savings over 12 months; NEXCOM had completed its operating year when we made our calculations. Table C-2 shows the results of our reconciliation.

Appendix C. Inspector General, DoD, Analysis of the DoD Report to Congress on the Distribution of Distilled Spirits

Table C-2. Analysis of NEXCOM Savings from Purchasing Distilled Spirits from Commercial Distillers

Annualized sales of distilled spirits	\$ 19,362,700
<u>NEXCOM Computations</u>	
Total annualized savings	\$ 10,721,029
Less: Adjustments for inventory carrying cost, additional handling cost, and buying expenses	(1,121,737)
NEXCOM-computed savings	\$ 9,599,292
<u>Inspector General, DoD, Computations</u>	
Less: Mathematical errors	(8,404,466)
Less: Other differences*	(1,033,572)
Corrected savings	\$ 161,254

*Other differences include offsets from distilled-spirit line item variations in the NEXCOM analysis and the effect of annualizing savings and adjustments over a 12-month period.

Our analysis is not based on a statistical sample and is only intended to convey the 1996 savings figure for AAFES and NEXCOM distilled-spirit distribution center operations. We applied midpoint prices for line items from pricing surveys that we received from 34 distributors in 14 states. Use of the pricing information provided an indication that savings may be achievable from distribution center operations. Our results should not be used as a basis for making distilled-spirit purchasing decisions.

Appendix D. Variables Affecting Case Cost Determinations

Several factors can impact distribution case costs for distilled spirits discussed in the finding. The factors that we encountered during the audit are only representative of the costs for 1996. Many factors enter into the calculation of case costs and vary depending on internal and external influences. In that regard, distilled-spirit case cost determinations must be continually updated as consumer preferences, marketing, and other factors change. Some of the factors that can impact distilled-spirit purchasing decisions are discussed below.

Automation. Automated conveyer systems are used to move merchandise to and from storage points in the distribution centers. Initial installation and startup costs for automated conveyer systems are high, but usually reduce case handling costs in the future.

Backhaul. Distribution centers receive merchandise from commercial vendors based on orders from military retail system buyers. Some of the merchandise is delivered directly to the military store, while the bulk of it, such as distilled spirits, is delivered to the distribution center. A truck departing a distribution center on a delivery run may deliver merchandise to as many as 30 military stores. To avoid returning to the distribution center with an empty trailer, AAFES developed a comprehensive backhauling program.

The AAFES backhauling program reduces the number of times its trucks return to the distribution center partially loaded or without a payload. Backhauling involves stopping at a vendor's location on a return trip and picking up merchandise that is destined for the distribution center. This management initiative ensures more efficient use of the AAFES-owned fleet of tractors and trailers, and ultimately reduces the per-case shipping and handling cost at each distribution center. Backhauling reduces shipping charges and is a cost avoidance that can reduce distilled-spirit case handling and storage costs. AAFES reported a cost avoidance of about \$15 million through its backhauling efforts in 1996.

Construction of New Storage Space. NEXCOM completed a move to a new facility in 1996 at Chino. AAFES is in the process of building a new addition at the distribution center in Newport News, and is building new space and renovating existing space in Atlanta. Each of these initiatives can impact the case shipping and handling costs for distilled spirits.

Level of Inventory. The level of inventory maintained in a distribution center affects inventory carrying costs. An inventory of sufficient size and diversity

Appendix D. Variables Affecting Case Cost Determinations

for efficient operations must be maintained, but the size should not be of such magnitude as to tie up funds that could be put to a better use. The level of inventory maintained also determines the amount of warehousing space required.

Transportation. The location of a distribution center affects transportation costs because the costs are based on distance. Most distillers are located closer to the East Coast, which makes shipping costs higher on the West Coast.

Volume. Distribution costs are spread over the total number of general merchandise and distilled-spirit cases distributed. The greater number of cases distributed, the lower the per-case cost.

Appendix E. Analysis of AAFES Case Cost Components

Title 10, United States Code, Section 2488, "Nonappropriated Fund Instrumentalities: Purchase of Alcoholic Beverages," requires the use of all cost components such as administration, depreciation, and inventory carrying costs in determining the lowest cost source for obtaining distilled spirits. The use of all cost components, or "full costing," denotes the set of all costs that encompass all expenses related to distilled-spirit distribution. Full costing should be used when deciding on selling prices and on which products to store in distribution centers or to obtain from commercial warehouses or vendors.

The table on the following page shows full costing attributable to distilled spirits for AAFES distribution centers during 1996.

Appendix E. Analysis of AAFES Case Cost Components

1996 Case Cost Components for Distilled Spirits				
Cost Component	Distribution Centers			
	Atlanta	Newport News	Oakland	Waco
Depreciation ¹	\$.33	\$.62	\$.19	\$.48
Inventory Carrying Costs ²	.57	.67	.91	.66
Other Operating Costs ³	(1.54)	(.20)	.35	(.21)
Personnel Costs ⁴	2.96	1.86	2.27	1.79
Transportation Costs ⁵	.78	.31	.34	.62
Total Per-Case Cost	\$ 3.10	\$ 3.26	\$ 4.06	\$ 3.34
¹ Includes depreciation expenses for the distribution center, including conveyer systems and fork lifts as well as automobiles, tractors, and trailers.				
² Includes the cost of capital invested in inventory. These costs were calculated using the average interest rate incurred by AAFES in 1996.				
³ Includes all the other expenses of operating the distribution center such as advertising, data processing, insurance, postage, supplies, travel, and utilities. The AAFES headquarters logistics and safety and security operations are allocated to the distribution centers. For three of the four distribution centers, the expenses are offset by income from backhauling merchandise from manufacturers and distillers to AAFES distribution centers. The expenses are also offset from distribution allowances for bulk purchases and reimbursements from loading containerized vans for overseas shipments.				
⁴ Includes payroll costs, fringe benefits, and training.				
⁵ Includes both transportation of inventory to the distribution center and transportation to the stores or to other distribution centers.				

Appendix F. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense (Comptroller)

Deputy Chief Financial Officer

Deputy Comptroller (Program/Budget)

Assistant Secretary of Defense (Force Management Policy)

Executive Director of Morale, Welfare, and Recreation and Resale Activities

Assistant Secretary of Defense (Public Affairs)

Director, Defense Logistics Studies Information Exchange

Department of the Army

Auditor General, Department of the Army

Department of the Navy

Assistant Secretary of the Navy (Financial Management and Comptroller)

Auditor General, Department of the Navy

Superintendent, Naval Post Graduate School

Commander, Navy Exchange Service Command

Director, Marine Corps Morale, Welfare and Recreation Support Activity

Department of the Air Force

Assistant Secretary of the Air Force (Financial Management and Comptroller)

Auditor General, Department of the Air Force

Other Defense Organizations

Director, Defense Contract Audit Agency

Director, Defense Logistics Agency

Director, National Security Agency

Inspector General, National Security Agency

Inspector General, Defense Intelligence Agency

Commander, Army and Air Force Exchange Service

Non-Defense Federal Organizations and Individuals

Office of Management and Budget

General Accounting Office

 National Security and International Affairs Division

 Technical Information Center

 Health, Education, and Human Services

Chairman and ranking minority member of each of the following congressional committees and subcommittees:

 Senate Committee on Appropriations

 Senate Subcommittee on Defense, Committee on Appropriations

 Senate Committee on Armed Services

 Senate Committee on Governmental Affairs

 House Committee on Appropriations

 House Subcommittee on National Security, Committee on Appropriations

 House Committee on Government Reform and Oversight

 House Subcommittee on Government Management, Information, and Technology,

 Committee on Government Reform and Oversight

 House Subcommittee on National Security, International Affairs, and Criminal

 Justice, Committee on Government Reform and Oversight

 House Committee on National Security

Part III - Management Comments

Office of the Assistant Secretary of Defense (Force Management Policy) Comments



FORCE MANAGEMENT
POLICY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
4000 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-4000

APR 22 1998



MEMORANDUM FOR ASSISTANT INSPECTOR GENERAL FOR AUDITING

SUBJECT: Draft Audit Report on the Economic Distribution of Distilled Spirits Within
DoD (Project No. 7LF-5020 dated February 17, 1998)

This responds to your request for views and comments on subject report. We support both recommendations made in the draft report and endorse strategies that will result in the procurement and distribution of distilled spirits at the lowest possible cost and offering maximum opportunities for local competition.

My specific comments on the recommendations contained in the report follow:

Recommendation 1. Establish policy for the Army and Air Force Exchange Service and the Navy Exchange Service Command to annually determine and disseminate to all military store managers fair and accurate per-case shipping cost that competitors will have to "meet or beat". The cost should be based on all cost components of distribution center operations attributable to distilled spirits.

Response: Concur. The Department will establish a policy, by August 1, 1998, requiring the exchange services to comply with this recommendation. By adopting this policy the Department will ensure that AAFES and NEXCOM procure and distribute distilled spirits at the lowest cost.

Recommendation 2. Establish policy for the Army and Air Force Exchange Service and the Navy Exchange Service Command to require military store managers or other purchasing authorities to use the per-case shipping and handling cost to competitively purchase distilled spirits using best business decisions.

Response: Concur. The Department will establish a policy by August 1, 1998, requiring the exchange systems to implement procedures that eliminate any restriction to competition by commercial distributors.

We appreciate your assistance in reviewing this difficult matter.


Stephen O. Rossetti, Jr.
Executive Director, MWR and Resale Activities



Audit Team Members

**This report was prepared by the Readiness and Logistics Support Directorate,
Office of the Assistant Inspector General for Auditing, DoD.**

**Shelton R. Young
Raymond D. Kidd
Michael A. Joseph
Timothy J. Tonkovic
Suzanne M. Hutcherson
Carolyn A. Swift
Eva M. Zahn**

INTERNET DOCUMENT INFORMATION FORM

A . Report Title: Economic Distribution of Distilled Spirits Within DoD

B. DATE Report Downloaded From the Internet: 12/28/99

**C. Report's Point of Contact: (Name, Organization, Address, Office
Symbol, & Ph #):** **OAIG-AUD (ATTN: AFTS Audit Suggestions)
Inspector General, Department of Defense
400 Army Navy Drive (Room 801)
Arlington, VA 22202-2884**

D. Currently Applicable Classification Level: Unclassified

E. Distribution Statement A: Approved for Public Release

F. The foregoing information was compiled and provided by:
DTIC-OCA, Initials: __VM__ Preparation Date 12/28/99

The foregoing information should exactly correspond to the Title, Report Number, and the Date on the accompanying report document. If there are mismatches, or other questions, contact the above OCA Representative for resolution.